

5. The invention relates to low molecular weight polyethylenimines, to vectors for inserting nucleic acids into cells which contain low molecular weight polyethylenimines, and to the preparation and use of the low molecular weight polyethyleneimine and the vector.

10 The invention relates to a vector for inserting a nucleic acid into a cell, which vector contains a low molecular weight polyethylenimine (LMW PEI) and a nucleic acid, with the LMW PEI having a molecular weight of less than 50,000 Da.

[illegible]